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WHAT IS CLAIMED IS:

1. An apparatus for obtaining odor chemicals comprising:
  - an adsorbing unit comprising an interior surface of an adsorbent material;
  - a suction device for drawing the odor chemicals into the unit; and
  - 5 a connecting tube which connects the unit and the suction device.
2. An apparatus according to claim 1 wherein the adsorbent material is selected from the group consisting of a polar adsorbent, a non-polar adsorbent, an intermediate polarity adsorbent, and any combination thereof.
3. An apparatus according to claim 2 wherein the polar adsorbent is Carbowax 20.
- 10 4. An apparatus according to claim 2 wherein the non-polar adsorbent is methyl silicone.
5. An apparatus according to claim 2 wherein the intermediate polarity adsorbent is selected from the group consisting of phenyl methyl silicone and polyacrylate.
6. An apparatus according to claim 1 wherein the adsorption unit is one or more capillary tubes.
- 15 7. An apparatus according to claim 6 wherein the adsorption unit is a plurality of capillary tubes.
8. An apparatus according to claim 7 wherein the plurality of capillary tubes consist of tubes coated with polar adsorbent, tubes coated with non-polar adsorbent and tubes coated with intermediate polarity adsorbent.
- 20 9. An apparatus according to claim 1 wherein the suction device is a diaphragm pump.
10. An apparatus according to claim 7 wherein each tube has an internal diameter of from about 0.07 mm to about 1.0 mm.

11. An apparatus according to claim 10 wherein each tube has an internal diameter of from about 0.75 mm to about 0.9 mm.
12. An apparatus according to claim 7 wherein each tube is from about 5 mm to about 120 mm long.
- 5 13. An apparatus according to claim 7 wherein the plurality of capillary tubes are in a bundle that is less than 6 mm in diameter.
14. An apparatus according to claim 7 wherein each tube has a coating of adsorbent material which is from about 0.1  $\mu\text{m}$  to about 1.25  $\mu\text{m}$  thick.
15. An apparatus according to claim 1 where the connecting tube is made from PTFE.
- 10 16. An apparatus according to claim 1 further comprising a support for supporting the adsorption unit.
17. An apparatus according to claim 16 wherein the support is made from a rigid material selected from the group consisting of glass, metal, wood and stiff polymeric materials.
18. An apparatus according to claim 16 wherein the support is an extendible tubular pole.
- 15 19. An apparatus according to claim 16 further comprising a housing sheath which is attached to the support and which holds the connecting tube and the adsorbing unit therein such that they are freely moveable.
20. An apparatus according to claim 19 wherein the housing sheath is made from a semi-rigid material.
- 20 21. An apparatus according to claim 20 wherein the housing sheath is made from nylon.
22. An apparatus according to claim 19 further comprising means for extending the adsorbing unit beyond the end of the housing sheath for collection of odor chemicals.

23. An apparatus for capturing odor chemicals comprising:

a plurality of capillary tubes which comprise interior surfaces comprising adsorbent material;

a suction device for drawing the odor chemicals into the plurality of capillary tubes;

5 a connecting tube which connects the plurality of capillary tubes and the suction device

a housing sheath within which the connecting tube and the plurality of capillary tubes are disposed such that they are freely moveable; and

a support for the plurality of capillary tubes.

24. A system for collecting and analyzing the odor chemicals emitted from an odor-emitting

10 source, comprising:

a plurality of capillary tubes which comprise interior surfaces comprising at least one adsorbent material for trapping odor chemicals;

a suction device for moving the air comprising odor chemicals through the plurality of capillary tubes;

15 a connecting tube which connects the plurality of capillary tubes and the suction device and provides an air-tight seal there between;

a thermal desorber disposed to hold the plurality of capillary tubes, for thermally desorbing odor chemicals trapped within;

a cryogenic focusing device; and

20 a gas chromatograph equipped with a mass spectrometry detector.

25. A system according to claim 24 wherein the thermal desorber is connected in-line to the cryogenic focusing device.

26. A process for obtaining odor chemicals from an odor-emitting source comprising:

providing a plurality of capillary tubes comprising interior surfaces comprising adsorbent material for adsorbing odor chemicals;

placing the plurality of capillary tubes in proximity to an odor-emitter;

drawing the odor chemicals into the capillary tubes with a suction device which is

5 operably connected to the plurality of capillary tubes for from 2 to 15 minutes.

27. A process according to claim 26 wherein the aroma chemicals are drawn through the tubes from about 2 to 5 minutes.

28. A process according to claim 26 further comprising:

10 desorbing the odor chemicals from the plurality of capillary tubes, to provide desorbed odor chemicals;

cryogenically focusing the desorbed odor chemicals to provide cryogenically focused odor chemicals; and

analyzing the cryogenically focused odor chemicals by a gas chromatograph equipped with a mass spectrometry detector.

15 29. An apparatus for obtaining odor chemical comprising:

an adsorption unit comprising surface areas of an adsorbent material; and

a suction device for drawing air containing odor chemicals across the surface of the adsorbent material.

20 30. An apparatus according to claim 29 wherein the adsorption unit has a plurality of crossing wall portions.

31. An apparatus according to claim 29 wherein the adsorption unit comprises a plurality of concentric tubes of different diameter within a tube.